- Coturnicops noveboracensis—Yellow Rail.
  May occur regularly. My only record is May 22, 1915.
- 64. Creciscus jamaicensis-Black Rail.

Doubtless they occur regularly during the fall and winter, but from their secretive habits are unobserved. Two were taken during very high water September 4, 1915, and two others seen on the same date. Two were seen October 9, 1916.

65. Ionornis martinicus-Purple Gallinule.

Not noticed as abundant and I have no records in mid-winter, although it may occur then.

66. Gallinula galeata-Florida Gallinule.

More generally distributed than the preceling species in summer and found regularly in winter.

67. Fulica americana-Coot.

"Blue Petes" are numerous from early fall until March and occasionally birds are seen during the summer, but whether or not they are breeders I have been unable to determine with certainty.

## AN ANNOTATED LIST OF THE LAND BIRDS OF SAC COUNTY, IOWA

BY J. A. SPURRELL, OF WALL LAKE, IA.

This paper continues a local list of the birds of my home county, the first part of which appeared in the Wilson Bulletin, Vol. XXIX, Number 3, (September, 1917), The reader of this list will find an account of the local topography and other data on the manner of collecting notes, etc., in the introduction of my other article.

This article is based on my own observations to a much larger degree than the former one, as only a few of the land birds have become extinct. I expected to find a record among the pioneers of some one having seen the Carolina paroquet, but I found only rumors of it, and therefore have given quotations showing that its former range covered this county. I was very much surprised to find among the pioneers a knowledge of the pileated woodpecker and the magpie, and still more surprised to find a Clarke's nutcracker which was taken locally among the specimens in the Smith collection at Odebolt, Iowa. Mrs. Smith has no catalogue of this collection but I interviewed

both Mr. Smith and her before her husband's death, and obtained a record of all specimens taken locally.

As in my former article, all data are based on careful sight records, specimens found dead, or specimens in the Smith collection. I do not expect subspecific sight records to be accorded the same value that they would have had the specimen been taken. In scientific names for subspecies, I have followed Anderson's "Birds of Iowa." Other names follow the A. O. U. 1910 checklist. I have not listed some of the vireos and flycatchers which undoubtedly occur, owing to the difficulty of sight identification. The migration data would be much more complete, had I been able to devote more time to it, especially in the later years of the record. However it is a good average for the region about Wall Lake. My complete records are in the possession of the Biological Survey at Washington, D. C., should further information be desired.

## ANNOTATED LIST

## BURROWING OWLS IN SAC COUNTY, IOWA (Addenda to Former Article)

In July, 1917, I saw two burrowing owls five and one-half miles north of Wall Lake, and also an occupied burrow. The old birds circled anxiously about as though their young were in the burrow. On the same day, I saw another pair about three miles north of this on one of the hills bordering Indian Creek.

Carolina Paroquet (Conuropsis carolinensis).

I found no observers of this bird but give the following quotation from "The Birds of Iowa" by Rudolph Martin Anderson. Proceedings of Davenport Academy of Sciences, March, 1907, pages 269, 270, 271. "The beautiful Carolina paroquet formerly ranged in flocks as far as the northern part of the state, but has not been observed in the state for at least thirty years and has practically been exterminated throughout the United States.

'Paul Bartsch, in an article on 'Birds Extinct in Iowa and those Becoming so,' states that the paroquet formerly ranged as far north as Spirit Lake, where it would frequently remain until the cold and snow would drive it southward. Its food in winter consisted chiefly of the seeds of the cocklebur. Its nature was so peculiar that when one of the number was killed or wounded, the others would gather around it with shrill cries and in this way the entire flock could easily be annihilated."

Yellow-billed Cuckoo (Coccyzus americanus americanus).

This species is the common cuckoo of Sac county, according to my observations, and I have looked at the bill of every cuckoo I got close enough to. A pair or more are found in nearly every grove. My first seen dates in spring range from May 14 to June 3. I have seldom heard its loud "kelp, kelp," until the first week in June, which makes it appear probable that it is quiet for some days after arrival. I have at several different times seen one with a dragon fly in its bill. I have known them to attack and drive away domestic fowls which came near the tree in which their nest was located.

Black-billed Cuckoo (Coccyzus erthrophthalmus).

This species is very rare about Wall Lake. I saw one July 28, 1913, another July 23, 1914, and my sister saw one in the spring of 1917. Mrs. George May also reported it.

Belted Kingfisher (Ccryle alcyon alcyon).

During the spring migration, I have noted this species at Wall Lake and very rarely in the "Goosepond." I have seen it in summer along the Raccoon river, and in the summer of 1916 I saw one several times along the Boyer river west of Wall Lake. I think it nests along both rivers.

Hairy Woodpecker (Dryobates villosus villosus).

The hairy woodpecker is a tolerably common winter visitant about Wall Lake. I have never found a nest or seen it in summer.

Northern Downy Woodpecker (Dryobates pubescens medianus).

This species is somewhat more common than the hairy woodpecker in winter and I have seen an occasional one in summer. I have found them in July, apparently breeding, in the woods along the Raccoon river at Sac City.

Yellow-bellied Sapsucker (Sphyrapicus varius varius).

I have found this bird as a rare spring migrant only. I saw one individual May 20, 1909, and another May 23, 1913. Many years ago, one nearly killed some Scotch pine trees in our front yard by drilling holes in the bark.

Northern Pileated Woodpecker (Phloetomus pileatus abieticola).

According to Mr. Hugh Cory of Sac City, a very large woodpecker, which in the vernacular was called "woodcock," was found in the timber along the Raccoon river in early days. Mr. Cory said that the early settlers considered them good eating. This resulted in their early extinction, as Mr. Cory stated that the last one he saw was in 1865.

Red-headed Woodpecker (Melanerpes erthrocephalus).

There is a specimen in the Smith collection. This species is a common summer resident, frequently using telephone poles to nest in. My first seen dates vary from April 22 in 1913 to Mav 15 in 1910. They depart early in the fall; September 7 and 14 being two of my last seen dates. I knew of one second brood being reared in which the young did not fly until about September 15. The parent birds departed only a few days after the young left the nest, while the latter remained in the vicinity until about October 15. The red-heads are not peaceable neighbors with the flickers and sometimes drive the latter away.

Northern Flicker (Colaptes auratus luteus).

The flicker is an abundant migrant, a common summer resident, and a rare winter resident in Sac county. I have known of a single individual wintering in the years 1910, 1911, 1912, and 1914. For many years flickers nested between the walls of a double-walled building stuffed with flax straw. I have had both flickers and red-heads nest in bird boxes which had ground cork in the bottom for a nesting material. Flickers can frequently be found over a mile from any trees, apparently feeding upon ground insects in pastures and stubble fields.

Red-shafted Flicker (Colaptes cafer collaris).

One reported by Mrs. E. B. Hayden.

Whip-poor-will (Antrostomus vociferus vociferus).

I have found this species very rare at Wall Lake, having identified only one individual, May 14, 1910. Mr. C. Orville Lee reported it as formerly common and nesting near Sac City.

Nighthawk (Chordeiles virginanus virginianus).

Specimen in the Smith collection. The nighthawk is a common migrant at Wall Lake, but I have never known it to nest in this vicinity. Mr. Lee states that it is a common nesting species in the vicinity of Sac City. I have found it common in early July along the Raccoon river east of Lake View. My first seen dates range from May 19 to May 30.

Sennett's Nighthawk (Chordeiles virginianus sennetti).

My only record is that of a female which I found sitting on a clod in a plowed field I was preparing for alfalfa seeding on August 12, 1909. It was a very pale silvery color, so much so that it was very conspicuous against the black dirt, in marked contrast to the ordinary nighthawk, which can hardly be seen in a similar situation. Although I flushed it repeatedly, it always perched upon the ground again. It allowed me to approach as close as eight feet and the horses still closer.

Chimney Swift (Chaetura pelagica).

For many years, I saw no swifts in Wall Lake, noting the first May 28, 1908. I have seen it every year since then, the dates of the first arrivals varying from April 26 to May 19. Old residents of the town report that the species formerly nested in the chimneys of houses. I have also seen it flying over the towns of Odebolt, Lake View, and Sac City. In October, 1917, I found an abandoned chimney swift's nest in an empty silo at Belle Plaine, Iowa.

Ruby-throated Hummingbird (Architochus colubris).

This tiny bird is usually a rare migrant, but in occasional years I have found it an abundant migrant, frequenting the apple orchards when these are in bloom. First seen dates vary from May 7 to May 30. It has been reported as nesting, but I have never seen it in summer except during August, when I took it to be a migrant.

Kingbird (Tyrannus tyrannus).

A common summer resident. The dates of first arrival vary from April 30 to May 12. Nearly every grove has its pair of kingbirds and I have even found a nest built on a brace in a fence corner, one-half mile from the nearest trees. They frequent wire fences out in the fields a great deal, especially after the young have flown. I have never seen the red crest on a living kingbird except when displayed by a victorious male after defeating a rival.

Arkansas Kingbird (Tyrannus verticalis).

A rare, but in recent years, a fairly regular migrant. I first identified it May 31, 1910, and since then have seen from one to four individuals every year. My sister saw three on May 15, 1913, and I saw one on August 20, 1913. Other first seen dates are: May 20, 1912, May 11, 1914, and June 9, 1915. In the summer of 1915 a pair stayed about our grove until late in June, but I do not think they nested.

Crested Flycatcher (Myiarchus crinitus).

A tolerably common summer resident along the Raccoon river and an occasional summer visitant at Wall Lake. I have noted it at the latter place, June 25, 1911, and June 13, 1915.

Phæbe (Sayornis phæbe).

A tolerably common migrant and a rare breeder in the vicinity of Wall Lake. I found a nest under a bridge July 4, 1908. In the years 1912 and 1913, the first arrivals in a specially favorable locality came on March 31.

Olive-sided Flycatcher (Nuttallornis borcalis).

Mrs. George May reported seeing three in the spring of 1912.

Wood Pewee (Myiochanes virens).

A common spring migrant, and a tolerably common summer resident and breeder.

Alder Flycatcher (Empidonax trailli alnorum).

A tolerably common migrant. I first identified it May 23, 1915. It was identified by my sister in the spring of 1917.

Least Flycatcher (Empidonax minimus).

Reported by Mrs. George May as abundant. I have found it common in the spring migration.

Prairie Horned Lark (Octocoris alpestris praticola).

This species occurs the year around, but is not as common in midwinter as in spring and summer. While cultivating corn in June I have frequently found their nests. They are placed at the base of a corn stalk, and are made of coarse grass leaves lined with finer grass leaves. They have contained either 2, 3, 4, or 5 eggs. I think four or five eggs is the complete set. On June 16, 1914, I found a horned lark's nest, filling it with dirt before I was able to stop the plow. I cleaned it out, unavoidably removing some of the lining in the process, and replaced the eggs. On. June 24, when I again plowed the corn, I again filled the nest with dirt, and this time accidentally cracked one of the eggs in removing the dirt. It was alive and well advanced in incubation.

Magpie (Pica pica hudsonia).

In the early days of settlement this species was found in the timber along the Raccoon river. Mr. Shelt Tiberghien said that he had seen them previous to, and in the 1860's, Mr. Lee stated that he had seen about twelve in the county, mostly in the early days, but with the last one seen in 1904.

Bluejay (Cyanocitta cristata cristata).

The blue jay is only a tolerably common breeder and a rare winter resident at Wall Lake. It is usually common in April and May, a local migration apparently taking place in these months. I have seen as many as ten to fifteen in one flock at this time and all flying northward. The blue jay is common both winter and summer in the timber along the Raccoon river.

Crow (Corvus brachyrhynchos brachyrhynchos).

Specimen in the Smith collection. The crow is a tolerably common breeder, a pair frequently nesting in a farmer's large grove or in an isolated clund of trees. During severe weather in winter, the crew is often absent from the vicinity of Wall Lake for long periods, but after the spring thaws they are much more common. I once saw a flock of about 200 flying in great circles

trending to the northward one spring day. Ordinarily ten to fifteen are as many as will be seen together at one time.

Clarke's Nutcracker (Nucifraga columbiana).

It is an accidental visitant. There is only one record for the county and fortunately this is authenticated by the specimen which is in the Smith collection.

Bobolink (Dolichonyx oryzivorus).

The bobolink is a common breeder on the borders of all sloughs or in wet pastures where tall bluegrass is found. My first seen dates vary from May 3, 1912, to May 18, 1910. Along in late July and August the plumage of the male changes to resemble that of the female, but is much brighter and more yellowish than is the plumage of the female in spring. The bobolinks then leave the pasturage or hayfields where they nested and congregate in flocks among the reeds or tall grass bordering lakes or sloughs. My last seen dates are from September 3 to October 10.

Cowbird (Molothrus ater ater).

Specimen in the Smith collection. The cowbird is a common breeder. I have frequently found its eggs in the nests of yellow warblers, and once each in a wood thrush's nest and a goldfinch's nest. It has been my experience that the yellow warbler always deserts its nest when a cowbird's egg is removed from it. After the nesting season the cowbirds leave the vicinity of the groves, and gathering in small flocks frequent pastures and similar places, but not being found about cattle as much as their name would indicate.

Yellow-headed Blackbird (Xanthocephalus xanthocephalus).

This bird is an irregular migrant, being common some years and rare in others. In the spring migration they sometimes fly in pure flocks and at other times in mixed flocks with redwings and grackles.

As a breeder, it is found in sloughs where very tall grasses such as reed canary grass grow in standing water. It nests in the "Goosepond" when this depression is full of water in summer. It formerly nested at a small pond north of Carnavon. My first seen dates in spring range from April 15 to May 3.

Red-winged Black-bird (Agelaius phænieus).

An abundant migrant, a common breeder, and an occasional winter visitant. I have winter dates of January 21, 1908; January 4, 1913; January 27, 1914; February 19, 1915. It usually arrives from March 4 to March 30. The birds continue in flocks for some weeks, not beginning nesting until the season's growth in the sloughs has attained considerable size. I have found its nests

built in curled dock plants of the current season's growth. The nest is usually placed in plants over water, but is often built among the grass on the tops of the "bogs" or hummocks in sloughs, or even among heavy weed patches in moist places. In the fall they assemble in huge flocks and visit the grain and corn fields, often damaging the tips of ears of corn when it is in the milk or roasting ear stage.

Meadowlark (Sturnella magna magna).

Since I do not possess a musical ear and have never been able to distinguish the eastern and western meadowlarks with certainty, I include both forms under the common name. The meadowlark is an abundant migrant and summer resident. It is one of the earliest migrants, often braving the last snow storms rather than go south again. First seen dates are from March 5 to March 25. It nests in pastures and hayfields and I think sometimes rears a second brood as I have found a nest under a bull thistle in late July. I have several times found single eggs lying upon the ground without any attempt at a nest. My father has seen a meadowlark attack and drive away a Franklin's spermophile, presumably from the vicinity of its nest.

Orchard Oriole (Icterus spurius).

A tolerably common migrant and breeder. First seen dates vary from May 8 to May 30. I have an abandoned uncompleted nest of this species made of bluegrass blades, which was started in a Scotch pine tree by a pair of these orioles, the male of which had the yellowish plumage and black throat patch of the second-year bird. The species departs very early in the fall.

Baltimore Oriole (Icterus galbula).

This oriole is a very common migrant and summer resident. It nests both in the farmer's groves and the shade trees of the towns. My first seen dates range from April 30 to May 13. It also departs very early in the fall.

Rusty Blackbird (Euphagus varolinus).

Specimen in the Smith collection. This species is a late fall migrant, often in company with redwings and Brewer blackbirds. I have two winter records of January 1, 1912, and January 12, 1913. In spring it usually migrates in flocks of its own kind only. My first seen dates cover the period from March 20 to April 19.

Brewer's Blackbird (Euphagus cyanocephalus).

A fairly common migrant, often in mixed flocks in the fall. At this season they follow the plow to pick up white grubs, angleworms and other insects, making identifications easy because they

often come within a few feet of the plow. In spring, my first seen dates are from March 15, 1914, to April 28 in 1910.

Bronzed Grackle (Quiscalus quiscula aeneus).

This species is a common migrant and breeder, and an occasional rare winter resident. A small flock wintered in the years 1911 and 1913, roosting in some white pine trees just north of the town of Wall Lake. In other years the first seen dates are from March 11 to March 29. On my home farm this species quit nesting in the soft maple trees of the grove when these reached a height of from forty to fifty feet, and then nested in the trees of the orchard from ten to twenty feet from the ground. During August, they are often found in mixed flocks with redwings, feeding from the grain shocks and corn fields.

Redpoll (Acanthis linaria linaria).

I have seen this species only one winter. I first identified it December 3, 1910, when I saw a small flock. It was tolerably common all that winter.

Goldfinch (Astragalinus tristis tristis).

The goldfinch is a rare winter resident, a common migrant, and a tolerably common breeder. I have seen it in mid-winter only twice and the same number of times in winter plumage in early spring. The first migrants in summer plumage were seen from May 3 to May 20.

Pine Siskin (Spinus pinus).

I have seen this species only twice. On September 2, 1908, a small flock of eight or ten were eating spruce tree seeds in our front yard. On May 13, 1914, I saw one pine siskin in company with a female goldfinch, and later in the day, about twenty siskins in a flock by themselves among the trees in town.

Snowflake or Snow Bunting (Plectrophenax nivalis nivalis).

Specimen in the Smith collection. The snowflake is very rare and irregular in its occurrence. On January 17, 1910, during a very severe blizzard, a flock of about one hundred alighted for a short time on a straw stack in our yard. On December 25, 1911, I saw one which acted as though it was lost. Dr. A. S. Hayden reported seeing a flock one winter, also during very severe weather.

Lapland Longspur (Calcarius lapponicus lapponicus).

This species is a regular and common fall migrant, a rare to tolerably common winter resident, and an abundant but very erratic spring migrant. In the spring migration, it travels in huge flocks, flock after flock passing northward and all going over in one day. My first seen dates in spring are few, February 24,

1913, and February 18, 1914. On April 18, 1910, I saw a huge flock of them in breeding plumage, the only ones I have ever seen in that plumage. They were feeding in a hayfield and gradually working my way, I stood still and was soon surrounded by them. They made a beautiful sight on the partly snow-covered ground. I think they had passed north and been driven back by a severe snow storm occurring the day before. March 23 is about the usual last seen date, but I saw one lone bird on May 22, 1915.

Chestnut-collared Longspur (Calcarius ornatus).

Mrs. E. B. Hayden and Mrs. George May reported two seen in the fall of 1912.

Vesper Sparrow (Poœcetes gramineus gramineus).

A rare spring migrant. I first identified it April 22, 1911. I have never found it breeding.

Savanna Sparrow (Passerculus sandwichensis savanna).

A tolerably common migrant in the open fields. I have never seen it near trees or bushes. My first seen dates vary from April 29 to May 9.

Grasshopper Sparrow (Ammodramus savannarum australis).

A common migrant and summer resident. It nests commonly in meadows and pasture lands, the nest being well concealed in the grass.

Leconte Sparrow (Passerherbulus lecontei).

On May 22, 1915, I captured a sparrow with a broken wing in the grass of a large pasture far from any trees. At first I could not identify it, but by comparison with the sparrow pictures in Bird Lore finally determined that it was a Leconte sparrow.

Lark Sparrow (Chondestes grammaeus grammaeus).

A rare migrant and also a rare breeder. I first identified it May 31, 1910. On July 4, 1911, along the Raccoon river, straight east of Lake View, I found a pair with young just able to fly.